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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,823	07/14/2003	Abir Ziyad Qamhiyah	08411-042001	7201

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EXAMINER
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PATEL, NITIN

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/619,823	<b>Applicant(s)</b> QAMHIYAH ET AL.	
	<b>Examiner</b> Nitin Patel	<b>Art Unit</b> 2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Yen (U.S. patent No. 6,573,464).

As per claim 1, yen shows a hand held device to control of a pointer on a display screen (In abstract suggests multiple sensor to produce a corresponding to sensing signal for a display); a shell capable of being held by hand (element 40 in input device is compact hand held device interpreted as a shell device); a pressure sensor having pressure sensitive zones (element 56 In Fig.5 includes four switch to measure pressure and all switch has different area with pressure zones as shown In Fig.5); and a n actuator positioned to manipulated by a digit(element 42 in fig.5 and In col.2 lines 66-67) of the hand holding the shell and that when manipulated presses against at least of the pressure zones(In col.3 lines 20-26) to cause the pointer to move on the display screen in a direction determined by the direction of motion associated with the least one of the pressure sensitive zones against which the actuator is pressed(In col.2 lines 50-

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54 element 38 work as a mouse assembly that can control a cursor on a display screen).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2,3,6,7,9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yen (U.S. patent No. 6,573,464) in view of Black (U.S. patent No. 6,304,247).

As per claim 2, Yen shows multiple pressure zones to move pointer on the display (In fig.5 element 56 multiple switches sensing pressure In col.2 lines 62-65). Yen does not specifically teach the pointer to move on the display screen with speed determined by an amount of pressure with the actuator is pressed against the at least one of the pressure zones.

Black shows the pointer to move on the display screen (in col.3 lines 54-55) with speed determined by an amount of pressure with the actuator is pressed against the at least one of the pressure zones (In col.3 lines 56-59). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to allow teaching of Black's into hand held device of Yen's because it would have allow a user to provide a pointing and signaling device for controlling the positioning, movement and operation of a cursor on the display screen.

As per claim 3, Yen does not specifically show pressure zones when operable produce a voltage signal to a relative amount pressure applied to each of the pressure sensitive zones. It would have been obvious to one of ordinary skill in the art, that teaching of Yen's four switch (element 56 in fig.5 which sensing or measuring the pressure and transferring to a sensing signal In col.2 lines 63-66) would have been obvious that switches capable of generating voltage signal to determined that how hard or less pressure has been used by a user on the actuator to point a cursor on a display screen with certain speed of a cursor.

As per claim 6, Yen shows pressure sensor (four switch measure pressure in Fig.5 four switch elements 56) has different pressure zones (as shown in fig.5 four different direction and in between element 64 the pressure zones) that each associated with a direction of motion of the pointer on the display screen and the actuator contains protrusions (In abstract of the same patent but in European patent data base 2002635216 provided with the reference states actuator with protrusions which are moved downwards to contact to pressure sensor for sensing the pressure to generate sensing signal )that each can press against one pressure zones when the actuator manipulated to cause the pointer on the display screen in direction determined by the direction of motion associated with the pressure sensitive zones which the protrusions are pressed.

As per claim 7, Yen shows Yen shows pressure sensor (four switch measure pressure in Fig.5 four switch elements 56) has different pressure zones (as shown in fig.5 four different direction and in between element 64 the pressure zones) that each

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associated with a direction of motion of the pointer on the display screen and the actuator contains protrusions (In abstract of the same patent but in European patent data base 2002635216 provided with the reference states actuator with protrusions which are moved downwards to contact to pressure sensor for sensing the pressure to generate sensing signal )that each can press against one pressure zones when the actuator manipulated to cause the pointer on the display screen in direction determined by the direction of motion associated with the pressure sensitive zones which the protrusions are pressed. Yen does not specifically shows an actuator contains eight protrusions that each can press against one of the pressure sensitive zones. It would have been obvious to one of ordinary skill in the art that having eight different protrusions made it more freely option to move pointer in different direction on the display (St. Regis Paper Co. V Bemis Co., Inc., 193 USPQ 8, 11 (7 th Cir. 1977)).

As per claim 9, Yen shows an actuator (element 42 In fig.5). Yen does not show actuator being substantially planar. It would have been obvious to one of ordinary skill in the art, that Yen's actuator is a circle planar as along as the functionality is same to point a pointer on a display by using an actuator (see Graham V John Deere co., 383 U.S. 1, 148 USPQ 459).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yen (U.S. patent No. 6,573,464) in view of Amano (U.S. Patent No. 5,691,747).

As per claim 8, Yen does not show the shell is a soft, flexible shell. Amano shows pressure sensor made form elastic member for a pointing device for generating electric voltage (in col.7 lines 10-17).

It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to allow the teaching of Amano's into pointing device of Yen's because it would have used as a user friendly portable pointing device to manipulate different direction without holding it firm in a hand or on a finger.

6. Claims 4,5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yen (U.S. patent No. 6,573,464) in view of Honma (JP 410301706A).

As per claims 4,5 Yen does not specifically show hand held device with a click button capable of being for left and right click operation.

Honma shows a hand held device (In fig.d) and a click switch (A30) equivalent to left click of a mouse or hand held device and (b31 In fig.b) works equivalent as a right click button. It would have been obvious to ordinary skill in the art, at the time of the invention was made to combined the teaching of Honma's right and left click operation with switch into hand held device of Yen's because it would have caused operation of pointer movement and drag and drop operation with only one finger or thumb.

7. Claims 10,11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yen (U.S. patent No. 6,573,464) in view of Vance (U.S. patent No. 6,437,682).

As per claims 10,11 Yen shows an actuator usable within a pointing device to control a pointer on a display screen planar (element 42 In fig.5 and In col.2 lines 65-67) having a top surface capable of being manipulated by a digit of hand to cause the actuator to swivel about a pivot point (In fig.5 element 62 upper surface of the actuator 42); an a bottom surface having protrusions (element 58 protrusions In fig.5) spaces

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apart in a polygonal pattern wherein the protrusions is capable of being pressed against a pressure zone(four different zones between switch 56 in fig.5) when the actuator swivels about the pivot point. Yen does not specifically show pressure sensitive film cause motion of the pointer on the display by pressing the pressure zones against.

Vance shows pressure sensitive film cause motion of the pointer on the display by pressing the pressure zones against (in col.6 lines 18-30 and In col.7lines 13-25 and lines 29-44). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to incorporate the teaching of Vance's into portable pointing device of Yen's because it would have provided a digital signal output to guide a pointer on a display screen.

8. Claims 12,13,14,15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yen (U.S. patent No. 6,573,464) in view of Vance (U.S. patent No. 6,437,682) in further view of Black (U.S. patent No. 6,304,247).

As per claim 12, Yen shows multiple pressure zones to move pointer on the display (In fig.5 element 56 multiple switches sensing pressure In col.2 lines 62-65). Yen does not specifically teach the pointer to move on the display screen with speed determined by an amount of pressure with the actuator is pressed against the at least one of the pressure zones.

Vance shows pressure sensitive film cause motion of the pointer on the display by pressing the pressure zones against (in col.6 lines 18-30 and In col.7lines 13-25 and lines 29-44). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to incorporate the teaching of Vance's into portable pointing



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device of Yen's because it would have provided a digital signal output to guide a pointer on a display screen.

Neither yen not Vance shows determining the speed of pointer press against a pressure zones. Black shows the pointer to move on the display screen (in col.3 lines 54-55) with speed determined by an amount of pressure with the actuator is pressed against the at least one of the pressure zones (In col.3 lines 56-59). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to allow teaching of Black's into combined system of hand held device of Yen's because it would have allow a user to provide a pointing and signaling device for controlling the positioning, movement and operation of a cursor on the display screen.

As per claim 13, yen shows protrusions (element 58 In fig.5) are equally spaced apart polygonal (In fig.5 protrusions 58 inserted with element 60 which are polygonal shape).

As per claim 14, Yen does not specifically shows an actuator contains eight protrusions that each can press against one of the pressure sensitive zones. It would have been obvious to one of ordinary skill in the art that having eight different protrusions made it more freely option to move pointer in different direction on the display (St. Regis Paper Co. V Bemis Co., Inc., 193 USPQ 8, 11 (7 th Cir. 1977)).

As per claim 15, Yen shows an actuator (element 42 In fig.5). Yen does not show actuator being substantially planar. It would have been obvious to one of ordinary skill in the art, that Yen's actuator is a circle planar as along as the functionality is same to

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point a pointer on a display by using an actuator (see *Graham V John Deere co.*, 383 U.S. 1, 148 USPQ 459).

9. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yen (U.S. patent No. 6,573,464) in view of Amano (U.S. patent No. 5,691,747).

As per claim 16, Yen shows controlling motion of a pointer on a display screen through operation of a pointing device (in col.2 lines 55-67) and detecting an amount of pressure applied pressure sensitive zones on a pressure sensor when at least one protrusion of an actuator presses against at least one of the pressure sensitive zone (In col.3 lines 19-30) and sending the information relating to the direction of motion to a computing device to cause motion of the pointer in the display screen (In Col.2 lines 50-53 capable serving as a mouse to control pointer on a display device).

Yen does not teach determining the direction of motion based on the amount of pressure applied to each of the zones using vector calculation.

Amano shows direction of motion based on the amount of pressure applied to each of the zones using vector calculation (In fig.5 and In col.9 lines 19-47). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to combined the teaching of Amano's into hand held device of Yen's because it would have provided for computing projection coordinates of the pressed pressure zones in accordance with the pressed point in relationship to a center of the base section.

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10. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yen (U.S. patent No. 6,573,464) in view of Amano (U.S. patent No. 5,691,747) in further view of Black (U.S. patent No. 6,304,247).

As per claim 17, Neither Yen Amano shows determining the sped of motion on the amount of pressure applied to each of the pressure zones.

Black shows the pointer to move on the display screen (in col.3 lines 54-55) with speed determined by an amount of pressure with the actuator is pressed against the at least one of the pressure zones (In col.3 lines 56-59). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to allow teaching of Black's into combined hand held device of Yen's because it would have allow a user to provide a pointing and signaling device for controlling the positioning, movement and operation of a cursor on the display screen.

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yen (U.S. patent No. 6,573,464) in view of Amano (U.S. patent No. 5,691,747) in further view of Honma (JP 410301706A).

Neither Yen Nor Amano show hand held device with a click button capable of being for left and right click operation.

Honma shows a hand held device (In fig.d) and a click switch (A30) equivalent to left click of a mouse or hand held device and (b31 In fig.b) works equivalent as a right click button. It would have been obvious to ordinary skill in the art, at the time of the invention was made to combined the teaching of Honma's right and left click operation with switch into combined hand held device of Yen's because it would have caused

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operation of pointer movement and drag and drop operation with only one finger or thumb.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 703-308-7024. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H Shalwala can be reached on 703-305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP *MS*  
September 3, 2004

  
Amare Mengistu  
Primary Examiner